

Keweenaw Bay Indian Community

Natural Resources Department

Annual Report 2013



The Natural Resources Department administers natural resource programs for the Keweenaw Bay Indian Community on the L'Anse, Marquette, and Ontonagon reservations as well as the western Upper Peninsula of Michigan (1842 ceded territory). These programs encompass a variety of activities, including: Lake Superior fishery assessments, Baraga county stream assessments, surface water and ground water monitoring, air and radon studies, brownfield programs, wildlife and wetland management, environmental assessments, monitoring of metallic mining and exploration activity in the Lake Superior basin, participation in the protection and enhancement of Lake Superior, and fish stocking from our hatchery. The department facilitates projects through grants from the Bureau of Indian Affairs, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and U.S. Department of Agriculture. The Tribal Council funds hatchery operations.

Fish and wildlife staff began working in 1988 and an environmental specialist was hired in 1992. The Department was organized in 1999 and brought environmental, fish and wildlife programs under one department. The departmental staff has grown over the years to the present level of seventeen full-time, five seasonal, and various part-time positions. Our staff works closely with the KBIC Natural Resources Committee. Our department is also guided by a 10 year Integrated Resource Management Plan adopted by the Tribal Council and Bureau of Indian Affairs in 2003.

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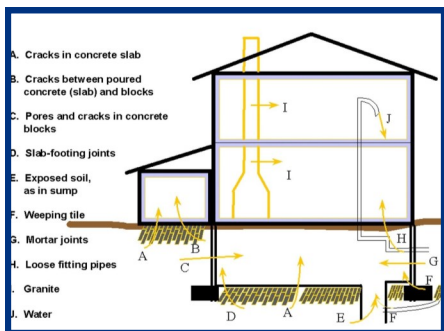
Funding Sources

- ◆ Keweenaw Bay Indian Community (KBIC)
- ◆ U.S. Environmental Protection Agency (USEPA)
- ◆ U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS)
- ◆ Bureau of Indian Affairs (BIA)
- ◆ Administration for Native Americans (ANA)
- ◆ U.S. Fish & Wildlife Service (USFWS)
- ◆ U.S. Forest Service (USFS)
- ◆ Indian Health Service (IHS)

Partners & Collaborators

- ◆ Lac Vieux Desert Band of Chippewa (LVD)
- ◆ Ottawa National Forest (ONF)
- ◆ Great Lakes Indian Fish and Wildlife Commission (GLIFWC)
- ◆ Bureau of Indian Affairs (BIA)
- ◆ U.S. Department of Agriculture-Natural Resource Conservation Service
- ◆ Natural Features Inventory
- ◆ Ferris State University
- ◆ Cedar Tree Institute
- ◆ Superior Watershed Partnership (SWP)
- ◆ Baraga County Cubscouts
- ◆ Baraga County Conservation District
- ◆ U.S. Forest Service (USFS)
- ◆ U.S. Fish & Wildlife Service (USFWS)
- ◆ U.S. Environmental Protection Agency (EPA)
- ◆ Michigan Department of Natural Resources (MDNR)
- ◆ Cooperative Weed Management
- ◆ Chippewa Ottawa Resource Authority (CORA)
- ◆ Michigan Technological University (MTU)
- ◆ Partnership for Watershed Restoration (PWR)
- ◆ Upper Peninsula Resource Conservation and Development (UP RC&D)
- ◆ U.S. National Park Service, Isle Royale





How radon can get inside your home



Several members of the National Tribal Steering Committee, including KBNRD Response Program Specialist Katherine Kruse



Sign for household hazardous and electronic waste collection event

Emergency Management

As part of the Tribal Response Program, the Environmental Response Specialist has been involved with emergency management activities. The Environmental Response Specialist is involved in quarterly conference calls with Region 5's Tribal Emergency Preparedness and Homeland Security group. In addition, the Response Specialist is involved with the joint Eastern Sector Maritime Security Committee and Upper Peninsula Port Area Committee meetings and exercises.

Radon Monitoring

KBNRD Air Quality Specialist conducts continuous monitoring of indoor radon gas concentrations at the KBIC Natural Resources Fish Hatchery buildings. Radon self-test kits are also handed out to Tribal Members during the year upon request. KBIC recognizes January as Radon Awareness Month and during this month, the Air Quality Specialist publishes an article with helpful information regarding the dangers of radon in the tribal newsletter. No elevated levels were detected in 2013.

Tribal Waste Response and Assistance Program

The Institute for Tribal Environmental Professional (ITEP) established a national tribal steering committee in order to assist with the work of the Tribal Waste and Response Assistance Program (TWRAP) and to ensure that tribal needs and priorities are addressed by this program's activities. The committee also develops and organizes the Tribal Lands Forum, an annual conference covering brownfields, solid & hazardous waste, underground storage tanks, emergency management, superfund and other topics related to environmental protection in Indian Country. KBNRD Response Program Specialist Katherine Kruse was chosen as chair for the committee.

Great Lakes Restoration Initiative

KBNRD received funding from the Environmental Protection Agency's Great Lakes Restoration Initiative (GLRI) to develop a sustainable hazardous waste collection program to serve tribal and non-tribal community members in Baraga County to prevent toxic contaminants from entering into Lake Superior. KBIC hosted two Household Hazardous and Electronic Waste Collection events and two "Milk Run" pickups for Baraga County businesses, churches, and schools. White goods were also accepted this year. Total waste for the two collection events was 34,094 lbs. Over 21,000 lbs. of waste were collected during the Milk Runs. Construction of a permanent hazardous waste collection facility was completed in 2013. The facility will be up and running once the KBIC Transfer Station is completed.

Tribal Air Funding

KBIC NRD received grant funding under the Clean Air Act Section 103 in 2012. The 2012 grant has been extended to allow for the Air Quality Specialist to complete an emission inventory. The Air Quality Specialist attended trainings to assist with completing a Level 4 Emissions Inventory. Along with keeping up to date on all air issues within the area, the Air Quality Specialist is continuously building program capacity.



Tribal Response Program

KBNRD received its initial TRP grant from the U.S. Environmental Protection Agency (EPA) in 2003, and annual funding has been provided by EPA since that time. The TRP, currently still being developed, will consist of a comprehensive set of protocols and tools to identify potentially contaminated properties, determine if areas of contamination are present on suspect properties, and to clean up and redevelop those properties that are found to be contaminated. Properties that are contaminated need to be cleaned up to a degree that ensures that human health and the environment are protected now and into the future. Currently 14 properties are enrolled as Brownfields sites under the TRP including a junkyard, a mining impacted property, dump sites and an old gas station. Some activities conducted during 2012 include:

- Planning clean-up of open dump sites.
- Updated Quality Assurance Project Plan, Integrated Resource Management Plan & Brownfields Management Plan
- Community outreach & education
- Attend trainings and workshops
- Maintained public record for brownfield sites
- Developed Standard Operating Procedures and policies to implement the Hazardous Substance Control Ordinance
- Investigate potentially contaminated sites

Solid Waste Disposal Facility

NRD staff continued to assist with the design and planning of the KBIC solid waste transfer station throughout the year. Staff assisted with developing job descriptions and organizational plans for the facility and in spring 2013, a facility manager was hired. Several planning meetings were held to review design plans, equipment options, staffing, and budget. Site grading and improvements prior to facility construction occurred in summer and fall of 2013. Construction of the facility is planned for 2014 and once completed, the facility operations will be overseen by the Public Works Department. The solid waste transfer station will accept municipal/household solid waste and will service Baraga County. Historically, there has been a great need for waste service within the county and the improper disposal of waste, such as dumping or burning, is a problem. The NRD has been, and continues to develop a sustainable waste program to address these problems.

Environmental Justice Small Grant Award

The Environmental Protection Agency awarded an Environmental Justice Small Grant to the KBIC NRD to develop and conduct a fish consumption survey of tribal members. Regulatory decisions used to determine environmental standards, such as water quality criteria and standards, and surface water and sediment cleanup levels, as well as whether to issue fish consumption advisories, are typically based on fish consumption data reflective of the general population. Therefore tribal populations and those populations that consume a higher rate of fish are not protected by these standards. In order to establish environmental standards that would protect KBIC human health and the environment, it is important to conduct a fish consumption survey of tribal members to determine a relevant and scientifically defensible fish consumption rate. Relevant and quantifiable fish consumption data will also help to improve risk communication.



Example of a brownfield site on the KBIC reservation



Example Transfer Station



Recreational and subsistence fishing are common practices in the community



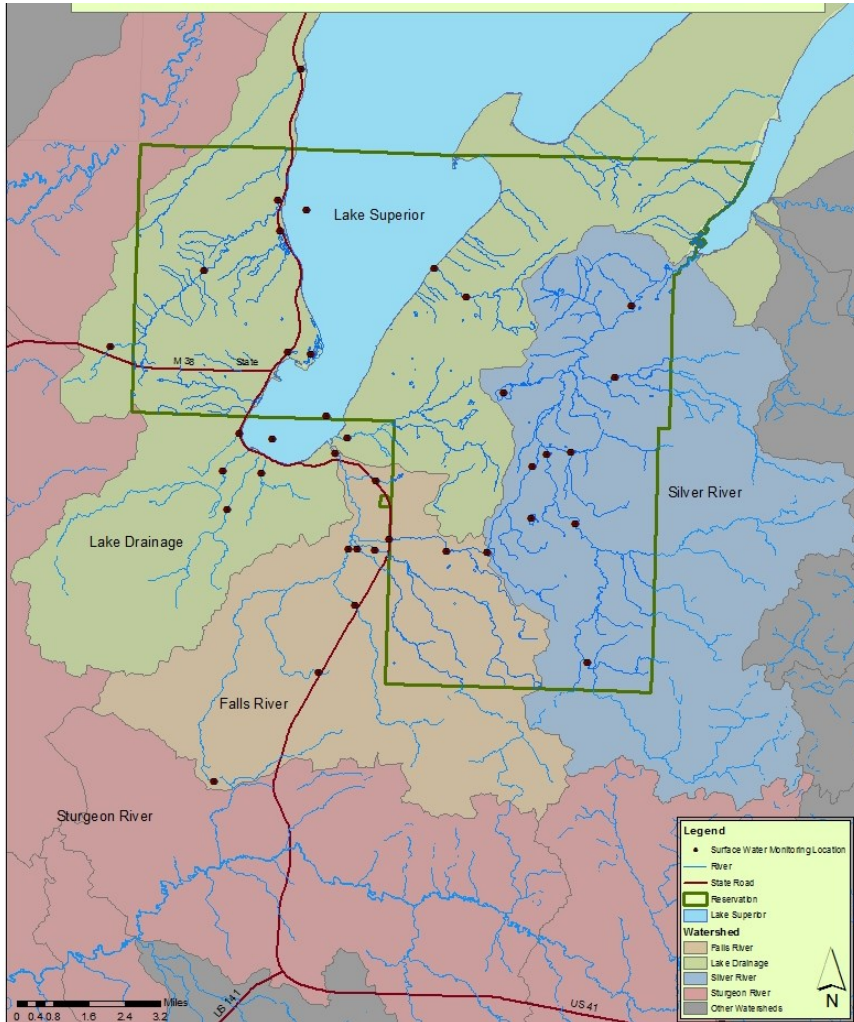
Environmental Review

NRD staff performed environmental review activities as required under the National Environmental Policy Act (NEPA) for the following KBIC projects: several tribal member individual water and wastewater projects; one community water system project; construction of a gas station in Marquette Township; and formation of a tribal corporation. Staff also assisted a consultant with completion of an Environmental Assessment (EA) for the KBIC Gas Station project and trust acquisition. This is required for the fee-to-trust application to the Bureau of Indian Affairs (BIA).



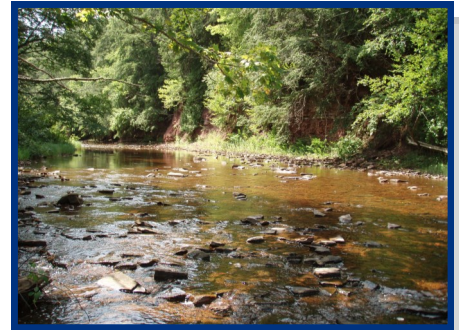
Baseline Data Collection

The surface waters within and adjacent to the L'Anse Reservation are critical resources for both human and environmental health. In 2013, Water Resources Staff sampled up to 18 sites for up to 19 parameters as selected in our two year cycle for water quality. The sites were sampled during the four quarters of the fiscal year. This practice has been ongoing since baseline sampling was completed in 2005.



Tribal Water Quality Standards

In 2013 KBIC submitted an application for Treatment in a similar manner to a State (TAS) for programmatic approval under sections 303 and 401 of the Clean Water Act. This approval will allow KBIC to develop and submit, for approval by the Environmental Protection Agency (EPA), our own water quality standards for KBIC reservation waters. Our standards will be designed to meet the specific needs and goals of the Community by identifying and defining the uses unique to our culture. Our application is currently under review by the EPA.



East Branch of the Sleeping River on KBIC land in Ontonagon County



Water resources specialist, Micah Petoskey collecting baseline data



Gomanche Creek



Recirculating tanks in main hatchery building



KBIC walleye rearing ponds on Brewery Rd



Natural Resources Technician Pat LaPointe holding a captured lake sturgeon during assessment efforts

Hatchery Upgrades

The hatchery facility continued with the process of an equipment upgrade. The purpose of the upgrade is to reduce water use through recycling, reduce groundwater pumping, improve water quality and systems monitoring, and improve our alarm and backup systems. The first part of the systems upgrade was actually completed in 2010 a new backup generator transfer switch was installed. Reducing water use by 25% could reduce the amount of groundwater pumped by over 10 million gallons per year. Work in 2013 included, installing an additional fry tank, contractual electrical and consultant work, and maintenance of equipment.

Rearing & Stocking

Approximately 10,313 lake trout, 56,944 stream brook trout, 17,329 walleye fingerlings and 850,000 walleye fry were stocked in 2013. Fish were stocked into Lake Superior, Portage Lake and various Western U.P. rivers and streams on and off the Reservation.

Disease Surveillance

To maintain maximum assurance that fish reared and stocked through the KBNRD Coldwater Hatchery Facilities are disease free, rigorous screening efforts, in cooperation with the USFWS LaCrosse Fish Health Center, are conducted at least on an annual basis. Results of 2013 screening efforts detected no pathogen issues with KBNRD Hatchery fish.

Commercial Fisheries

In 2013 there were 11 active tribally licensed commercial fishermen. License year runs from May 1st of 2012 through April 20th, 2013. Total reported commercial harvest for the 2013 calendar year was 57,921lbs of lean lake trout, 52,646lbs of white fish, 136lbs of siscowet and 1,274 lbs of herring. KBNRD staff collects monthly catch reports from licensed commercial fishers, and monitors commercial harvest throughout the year. Collected data is compiled into existing databases and forwarded to GLIFWC Commission for use in regional interagency fishery management. KBNRD communicates with GLIFWC regarding commercial harvest monitoring activities.

Lake Sturgeon Research

KBNRD successfully captured, tagged and released several juvenile and adult lake sturgeon in Keweenaw Bay in the spring and early summer of 2013. Primary objectives of this work are to tag and recapture as many lake sturgeon as possible as recaptures are vital in increasing precision in population estimates for this imperiled species. KBNRD also worked cooperatively with USFWS, MIDNR, WIDNR, CORA, Bad River, Red Cliff, Ontario Ministry of Fisheries, and GLIFWC to conduct a Lakewide Standardized Lake Sturgeon Survey. KBNRD also assisted with survey and data collection efforts at South Portage Entry and the Ontonagon River.

Lake Trout Assessment

Various lake trout surveys are conducted by KBNRD, in cooperation with several other agencies. Survey protocols are standardized and in compliance with Great Lakes Fishery Commission and Lake Superior Technical Committee standards. These include, but are not limited to, standardized Spring, Summer and Fall surveys. Results of each of these major 2013 KBNRD surveys are summarized below:

KBNRD Spring Survey

Standardized gillnets are deployed throughout lower Keweenaw Bay with the primary objective of capturing and assessing pre-recruitment sized and aged lake trout. Results of 2013 efforts indicate a continuing decline in lean lake trout stocks that are nearly mature enough to reproduce (fish aged 5 to 7 years old). As part of research protocol, KBNRD also documents sea lamprey attack rates and wounding types and severity. Sea lamprey attack data indicate stability in the rate and extremity of attack, however current rate detections continue to be unacceptably high.

KBNRD Summer Survey

Summer surveys assessed juvenile lake trout abundance and also indicated a possible decline in abundance for smaller, younger fish. As part of protocols for summer survey, KBNRD also attempts to gauge relative abundance of young lake herring (aka cisco), deepwater chub varieties, and other forage species. Based on initial data summaries, prey species abundance in most of Keweenaw Bay is looking great!

KBNRD Fall Survey

Fall surveys focus on spawning lake trout abundance on local reefs. In 2013, KBNRD visited the Huron Islands Refuge complex. Survey results indicate a stable population of mature fish here. Additionally, eggs were collected from lake trout and were fertilized and returned to the hatchery for incubation.



KBNRD staff setting a fyke net on Portage Lake, Houghton County



Wildlife Technician Kyle Seppanen deploying a drift net to catch young sea lamprey on the Little Carp River



Black bear cubs caught on remote camera



Wildlife technician, Kyle Seppanen checking remote cameras during winter



Sand hill cranes

KBIC Wildlife Stewardship Plan

The process has begun for drafting of the KBIC Wildlife Management Plan (WMP). Two focus groups, a Traditional Ecological Knowledge committee and a Scientific Advisory Group have been formed to assist with design and review of the KBIC WMP. Initial meetings with the focus groups took place in winter 2013 and the first draft will be distributed in April 2014. We anticipate a final plan to be submitted to Council in August 2014.

Results of a Wildlife and Natural Resources Community Survey were presented at two public meetings and a final report was written and is available on the NRD website (<http://nrd.kbic-nsn.gov>). Values and comments from this community survey will be considered and incorporated during the drafting of the WMP. Results from baseline data collected during a Wildlife and Habitat Inventory study will also be taken into consideration for the management plan.

KBIC Wolf Management and Endangered Species

The first legal wolf hunt in Michigan took place November 15 through December 31, 2013. There were three wolf management units (WMU) designated for allowable take with a limited harvest of 43 total wolves of which 23 were taken. Wolf hunt licenses are not available through KBIC for tribal hunters. Tribal Council passed a resolution in 2012 against hunting and trapping of wolves within the Home Territory which encompasses the western U.P.

State quotas per WMU and results were as follows:

- ◆ WMU A in Gogebic County in the far western U.P. had a quota of 16 wolves and 5 were legally registered with the State.
- ◆ WMU B in portions of Baraga, Houghton, Ontonagon, and Gogebic counties (including the western half of the KBIC L'Anse Reservation) had a quota of 19 wolves and 14 were legally registered with the State.
- ◆ WMU C in portions of Luce and Mackinac counties had a quota of 8 wolves and 4 were legally registered with the State.

KBIC NRD staff started assisting with wolf monitoring with the MI DNR during winter wolf track surveys of 2013. We are particularly interested in approximately seven wolf packs located on or near the L'Anse Reservation. We have begun to train with USDA Animal and Plant Health Inspection Services (APHIS) to learn the protocol used by the state for better collaboration and consistency of comparing data. We are hopeful that there will be funding provided by BIA to continue this important cooperative monitoring project in 2014.

Annual Midwest Crane Count

In April, 2013, KBNRD, and several volunteers from the Ojibwa Community College and the local community (including local private property owners) assessed 11 different areas of Baraga County for cranes, attempting to document the number of individual cranes as well as breeding pairs. The only way counters can document breeding pairs is to document the "Unison Call", with 2 birds singing different songs in tandem. The 2013 Crane Count involved more than 20 counters, and over 2 dozen individual cranes were counted, with 6 breeding pairs confirmed.

Frog & Toad Surveys

Surveys for frogs and toads are conducted during the breeding period which usually spans from April through June. Species detected in 2013 include spring peeper, wood frog, Common gray treefrog, leopard frog, green frog, and American toad. Survey areas include Menge Creek, Falls River, Sand Point sloughs, Pequaming bog, Mud Lakes, and Indian Cemetery road.

Circle of Flight Waterfowl Nest Boxes

Each winter waterfowl nest boxes throughout the reservation are checked for signs of use by wood ducks and other wildlife. Annual checks of the boxes have revealed use by wood ducks (~20%), flickers, wasps, other waterfowl (mergansers), and small mammals.



Circle of Flight Waterfowl Surveys

In 2013, waterfowl surveys took place weekly for 10 consecutive weeks at the Head of Keweenaw Bay, Mud Lakes and Sand Point, and 3 weeks at Huron Bay. The average number of waterfowl observed per site visit was 28 waterfowl. A total of 939 waterfowl were observed throughout the surveillance period at all sites combined, down significantly from 2012 which revealed 2,338 total waterfowl. There were 16 species detected including Wood Duck, Common Merganser, Gadwall, Goldeneye, Greater Scaup, Hooded Merganser, Red Breasted Merganser, Mallard, Pied Billed Grebe, Ring Neck Duck, American Coot, Black Duck, Blue Winged Teal, Bufflehead, Canada Goose and Trumpeter Swan.



Wood ducks

Fish Passage Improvement Projects

With GLRI support, the KBIC (NRD and Public Works) is working with USDA-NRCS and the Baraga County Road Commission (BCRC) to improve the health of several stream systems in and around the Reservation by installing culverts or bridges that allow passage of aquatic organisms upstream and downstream. Road culverts are improved by replacing those that are either too small or perched above the river bottom, thus impeding passage for fish and other aquatic organisms. Four connectivity projects were completed in 2013; one at Denomie Creek crossing on Indian Road, one on Denomie Creek on Golf Course Road, and two on Kelsey Creek both on Cadeau Road. To date, six culvert replacements of twelve total have been completed opening 25 total miles of stream connectivity. Four more road stream crossing restorations are planned for completion in 2014.

Wild Turkey Habitat Improvement

Wild turkey populations have increased locally thanks to the dedication of members of the Keweenaw Cutters Chapter of the National Wild Turkey Federation. KC Chapter has completed successful habitat projects, winter feeding programs and monitoring of turkeys over the past few years. It is important to note that Spring is a critical time for turkeys because females are incubating their eggs. Killing a single female turkey during spring potentially kills an entire clutch (10-12 eggs). We ask that KBIC hunters avoid shooting female turkeys in spring to help support a growing population of turkey.



Post culvert removal on Golf Course Road



Aquatic Invasive Species

Aquatic invasive species (AIS) are a concern for our community. These invaders impact our waterways and jeopardize our local ecosystem. In addition to the sea lamprey, which has been present for more than 50 years, annual fishery assessments and monitoring have identified several other exotics, including Eurasian ruffe, alewife, rainbow smelt, spiny water flea, Eurasian watermilfoil, and suspect rusty crayfish. KBIC endorses early detection-rapid response methodology and has secured funding to create an Aquatic Invasive Species Plan that will focus around this methodology. The AIS Plan will help KBIC more effectively use resources to combat this growing problem.

Sea Lamprey Control

Since 2006-2007, the USFWS and GLIFWC have subcontracted KBIC to maintain and collect catch data from an adult sea lamprey trap on the Silver River Watershed. By assessing adult sea lamprey populations in the Silver River, estimates of potential larval lamprey production for the system can be generated, which in turn gives sea lamprey control experts vital information on how to most effectively eradicate larval lamprey before they can return to Lake Superior to attack more fish. The trap was checked twice a week from late April until July 10, 2013. Twenty-three adult sea lamprey were marked and released from the Silver River trap (compared to 35 in 2012). The Silver River Watershed trap is one of seventeen traps in the Lake Superior basin, and data collected via Silver River trapping efforts compliments the Lake Superior Basin-wide sea lamprey survey efforts.

Invasive Plant Species

In 2013 staff continued with monitoring, locating, and working on controlling non-native invasive plant species on the reservation. In summer and into the fall, attention was focused on five invasive species: purple loosestrife, Japanese barberry, spotted knapweed, marsh thistle and Eurasian watermilfoil. Actions are being taken to control these species on the reservation including beetle release, cutting, pulling, and in some case use of herbicides (Japanese barberry). KBIC collaborates with ~9 other agencies/groups in an effort to protect our natural resources from invasive species. U.S. Forest Service, Great Lakes Indian Fish and Wildlife Commission, Midwest Invasive Plant Network (MIPN), and Baraga Conservation District are a few of our partner organizations. Other species of concern include exotic honeysuckle, marsh thistle, giant knotweed and common and glossy buckthorn. A public weed pulling event was held at Sand Point in the summer.

2013 included assistance with invasive plant control and inventory work (9 inventoried; 5 of which were controlled). Invasive species workplans include inventorying, mapping, and decision making (control methods, monitoring, outreach); impacting over 300 acres of uplands and 1700 acres of wetlands. Cooperative weed management continued with regular meetings, trainings, and work days with local partnerships



Eurasian watermilfoil



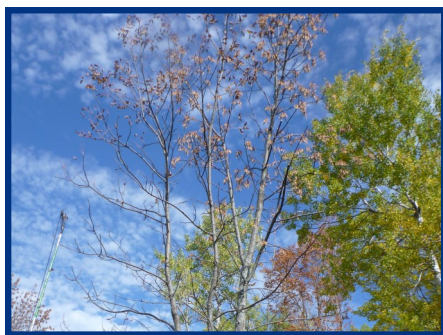
Wildlife Technician Kyle Seppanen deploying a drift net to catch young sea lamprey on the Little Carp River



KBIC NRD Plant Technician using chemicals to control Japanese barberry



Plants in greenhouse ready for transplanting



Top of Ash tree loaded with seed



Wild rice monitoring/planting

Greenhouse

In 2013, 56 species were grown in the greenhouse and planted at Sand Point Restoration site and in seed plots; this is fourth season for the greenhouse. Seed was collected from 22 native species; ash seed was sent for long-term cold storage and the rest will be used in our greenhouse for restoration sites. Species include: tobacco, sweet grass, white sage, pearly everlasting, big and little bluestem, black-eyed susan, wild columbine, ginger, fireweed, and milkweed. Educational signage was designed concerning native species and pollinators. Workshops and nursery training were attended as part of our Zaagkii Project Partnership. Sand Point will continue to be the number one priority area to maintain through our Plants Program. The opportunity to improve a degraded brown field area back into a lush environment rich in plants and wildlife habitat has been a gift to future generations of KBIC, the general public, and local birds and wildlife. Be sure to visit Sand Point and see the transformation for yourself.

Ash Seed Collection

Ash has cultural and historical significance for the Anishinaabe. As part of the preservation of ash trees for future generations, KBNRD is part of a cooperative effort with BIA Forestry and USDA Natural Resources Conservation Service for collecting ash seed. In 2013 seed was collected from 13 trees; KBIC collection has a total of 116 from all the years. An agreement with the USDA Agricultural Research Service in Colorado provides for long term cold-storage of ash seed collected from KBIC lands.

Wild Rice

KBNRD has planted thousands of pounds of wild rice at more than 13 sites within Baraga County. Huron Bay has a possible 35 acres of wetlands with favorable conditions for wild rice, the largest site bordering the reservation. This year 3090 pounds of wild rice were planted at four sites in Baraga County. Other sites were monitored and checked for wild rice, as well as checking if conditions were favorable for growth. A wild rice camp was held in the fall.



Great Lakes Restoration Initiative Capacity Funding

The Lake Superior Program Coordinator was hired to fill several gaps in capacity and is providing active and regular participation in the Binational Program and the Lakewide Management Plan (LaMP) process, additional outreach and education for the community and for tribal youth, helping develop a plan to address issues of Climate Change on the Reservation, and link KBIC activities in natural resource management to related activities throughout the basin. Some of the activities completed by the new Lake Superior Program Coordinator position include:

- Lake Superior Day Beach Clean-up
- Development of KBIC Natural Resources Department Quarterly Newsletter, *Babaamaajimowin Akiing*
- Participation in Binational Program activities through the Superior Work Group and subcommittees
- Press releases and newsletter articles to keep the community informed of KBIC NRD activities and events
- Creation of informational brochures for invasive plant species on the reservation and others
- Attending local, regional, and international conferences, meetings and trainings

Mining

Since 2011, the KBNRD has been able to build the capacity of the KBIC to address increasing mineral development pressure throughout the 1842 Treaty Territory of Michigan and Lake Superior basin. In 2013, the KBNRD Mining Technical Assistant continued to track mineral exploration and review and comment on mining related permit applications -- giving special attention to potential impacts to treaty resources, wildlife habitats and water quality. This included mineral exploration within the Ottawa National Forest, and activities and permits related to the Orvana Copperwood project as well as the Eagle Mine and Humboldt Mill (now owned by Lundin Mining Corporation).

Michigan's Upper Peninsula continues to deal with legacy impacts from historical mining activities, such as the Torch Lake Area of Concern with long-standing fish consumption advisories largely due to elevated concentrations of PCBs. Within the past year, KBNRD began collaborating with researchers at Michigan Technological University to better understand available information and knowledge gaps at Torch Lake in order to identify possible pathways for improving conditions.

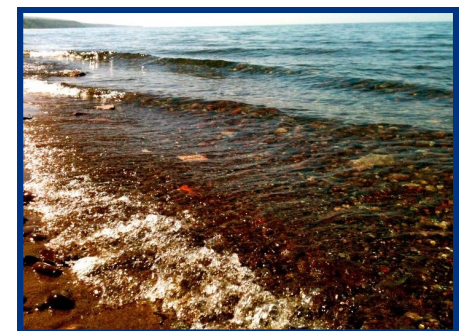
The Mining Technical Assistant assists the KBIC Government in decision-making processes related to mining, and in 2013 this included the drafting of talking points for meetings with state and federal officials and the introduction of a mining moratorium ordinance for the reservation. In addition, mining related webinars and conferences helped increase technical capacity, and information and input was shared regionally through the Lake Superior Binational Program Superior Work Group Mining Subcommittee and EPA Region 5 mining meetings and conference calls. Community outreach and education opportunities for 2013 included a Youth Mining Education Field Day in July, a Tribal Mining Forum in September, informational tables at powwows, mining potlucks, updates in the KBIC Newsletter and on the KBNRD website, and presentations at high schools, colleges and other events.



Volunteers enjoying Lake Superior after collecting trash along the beaches all morning for Lake Superior Day



Rio Tinto Eagle Mine in Marquette County, MI
Photo credit: Jeremiah Eagle Eye



Lake Superior near the Orvana Copperwood proposed mine site



Hancock Middle School students learning about the hatchery facilities and fish rearing



Kids fishing during the derby



Students at the 2013 Environmental Fair learning about tornadoes

Tours

KBNRD provides tours to many groups throughout the year. Some of these groups include visiting college students and instructors from MTU, NMU, and KBOCC, local grade school classes, federal, state and NGO agency employees, the Intertribal Nursery Council, the Youth Conservation Crew, community members, and many others. Tours can be scheduled at any time, but may be dependent on season and happenings around the hatchery buildings. Guest speakers can be arranged on an individual basis.

Youth Conservation Crew

KBIC and the Superior Watershed Partnership (SWP) teamed up for the fifth year in a row to offer a Youth Conservation Corps (YCC) for tribal youth. This year's crew was supervised by Tonya Swenor and Greg Houle from SWP. YCC activities included (but were not limited to) beach clean-ups, invasive species control, native plantings at Sand Point, lamprey monitoring, and compost bin construction. We hope to be able to offer this program every year to provide opportunities for tribal youth to get outdoors and learn about natural resources and natural resource stewardship.

Annual Kid's Fishing Derby

This year marked the 11th annual KBIC Kid's Fishing Derby at Sand Point near the Lighthouse Pond in Baraga. Attendance was recorded breaking with 425 kids participating (up from 370 in 2012). Over 100 people volunteered during the Derby including local sportsman's club members, state, federal and tribal agency employees, community members, 4-H, KBIC summer youth programs, and many more. Activities include pond fishing contest, inner tube casting, Velcro fishing, big trout tank fishing, moon walks, and other small games. Prizes are given away for the most fish, biggest fish, and catching a tagged fish.

Annual Environmental Fair

The 5th Annual KBIC Environmental Fair was held on April 24, 2013 at the KBIC Niiwin Akeaa Center. The annual educational event is organized by the KBIC Natural Resources Department and focuses on providing environmental and natural resource education to school-aged children. This year's event hosted approximately 330 second through fifth graders from area schools that attended the event at various times throughout the day. Displays were provided by the Natural Resource Department, as well as several outside organizations and agencies. Each child received a 'goody-bag' with an activity book, educational materials, and 'treats'.

Volunteers

There are a number of volunteer opportunities available throughout the year with the KBNRD. These opportunities include greenhouse planting and transplanting to Sand Point, fish tagging, wildlife camera checks, invasive plant control, and KBIC sponsored events such as the Kid's Fishing Derby and Lake Superior Day beach clean-up. We are thankful to all of our volunteers for their support and assistance throughout the year. We hope others will consider volunteering in the future.



Lake Superior Day

The Keweenaw Bay Indian Community (KBIC), whose Reservation lands border Keweenaw Bay of Lake Superior, organized a beach cleanup on July 19th in celebration of Lake Superior Day. About 40 people including KBIC Natural Resources Department staff and tribal youth crews cleaned approximately 7 miles of Lake Superior beaches from just north of Assinins/Sand Point all the way around the Bay to Pequaming/Second Sands Beach. The day started with an opening ceremony performed by KBIC member Debra Williamson. The cleanup was followed by a luncheon provided by the KBIC W.H.I.P.P. Taskforce at the Sand Point Light House day use area. After lunch participants enjoyed time canoeing on the Lake.



Lake Superior Day volunteers

Trail System Expansion

This year the trail system was expanded at both Mud Lakes and Sand Point with the help of the Summer Youth Crew. Activities included maintenance and building of floating docks, boardwalks, and clearing or brush and debris along trails. Additional turtle platforms have also been added to nearby waters, gravel paths have been added through the Sand Point capping project, and a fitness walk was completed in 2013. Many agencies, departments and committees are working together on these trail systems and plan to continue with additions in the coming years. The trail system provides a unique opportunity to learn more about our wetlands, culture, and enjoy some exercise.



Trails through Sand Point restoration area

Gathering

Plant gathering is enjoyed by many tribal members in many different ways; berry picking, cranberries, maple syrup, wild rice, boughs, medicinal and non-medicinal plants. We assist tribal members in gathering with maps, workshops, information, finding different species, and checking for harvestable areas. Some of the species grown in the KBIC greenhouse are culturally significant plants in high demand; sweetgrass, sage, and bee balm are a few. These species are currently being added to our restoration site at Sand Point but we are also working on having larger harvestable areas for tribal members. Our plants program assists our Traditional Medicinal Clinic. Many enjoyable hours were spent with teachings and finding, gathering, and processing plants with the Cultural Committee. It was a great reminder of the importance of looking at a whole ecosystem and protecting a variety of our habitats for sacred gathering. With land use discussions ongoing, ensuring sacred gathering areas where culturally significant plants are protected and available to the KBIC community is a priority. This year the Zaagkii Project partnership discussed the importance of crop wild relatives. Our Eastern region has many berries and working with cranberries is the first species being discussed.



Gathering berries on the Yellow Dog Plains.



EMPLOYEES



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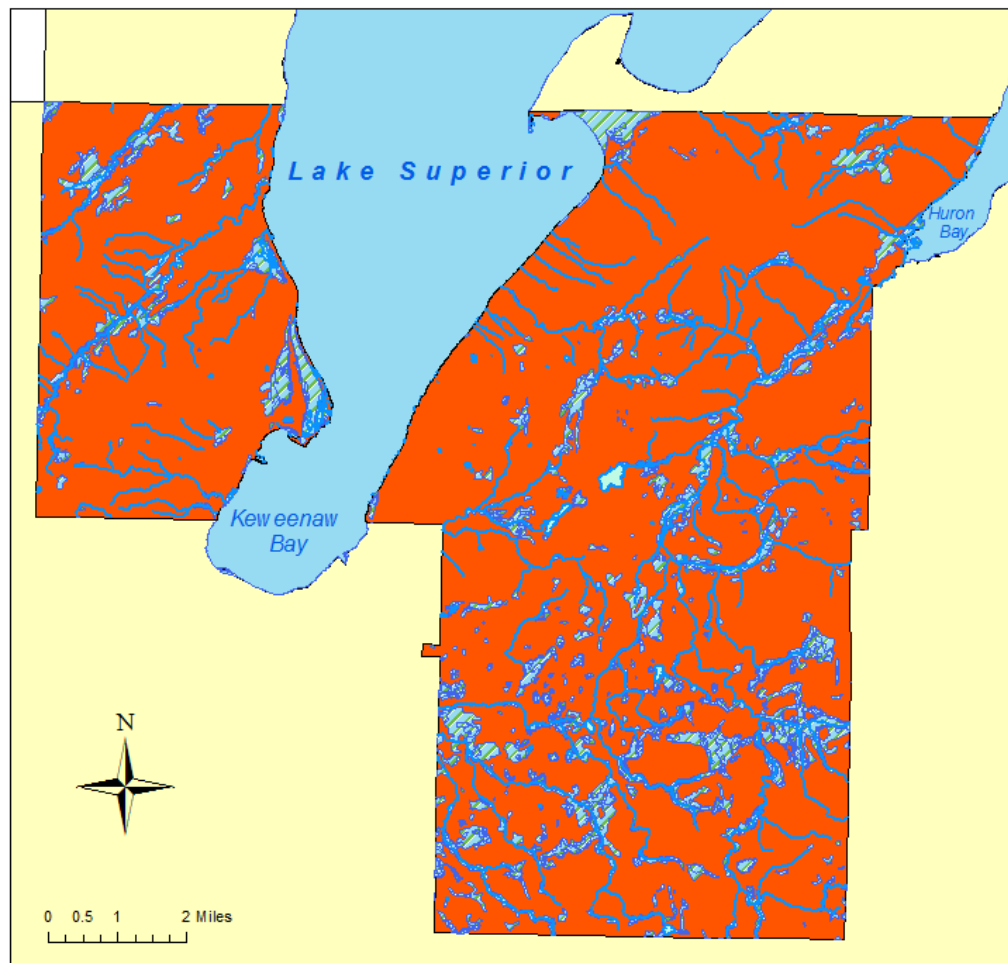


Contact Information:


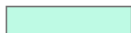



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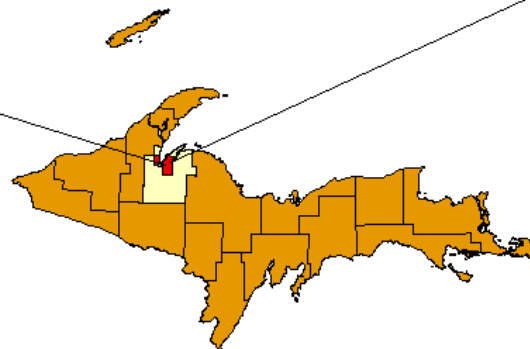


KBIC L'Anse Reservation



Legend

-  Rivers
-  Lakes
-  Wetlands
-  KBIC L'Anse Reservation
-  Baraga County



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